

## CLAIMS

What is claimed is:

1. An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform; and

writing input data on the recording medium using the adaptive write pulse waveform.

2. The adaptive writing method of claim 1, wherein the grouping table includes grouping markers associated with a magnitude of a present mark and magnitudes of leading and/or trailing spaces of the present mark.

3. An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table having width data of the first and/or last pulses of the write pulse waveform based on a magnitude of a present mark of input data and magnitudes of leading and/or trailing spaces of the present mark to generate an adaptive write pulse waveform; and

writing the input data on the optical recording medium using the adaptive write pulse waveform,

wherein the adaptive write pulse waveform is different between respective zones of the recording medium and the input data is written in a land track or a groove track on the recording medium.

4. An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table having width data of the first and/or last pulses of the write pulse waveform to generate an adaptive write pulse waveform; and

writing input data on the recording medium using the adaptive write pulse waveform,

wherein the adaptive write pulse waveform is based on whether the input data is written in a land track or a groove track.